DRIVER TAILGATE LESSON PLAN

Emergency Maneuvers

CITY AND COUNTY OF HONOLULU
DEPARTMENT OF HUMAN RESOURCES
Division of Industrial Safety and Workers' Compensation

EMERGENCY: An unforeseen event that calls for immediate action. If the action is delayed or incorrect the result is an accident. Don't let it happen to you. Professional drivers avoid accidents by knowing what to do in emergencies and taking the correct action.

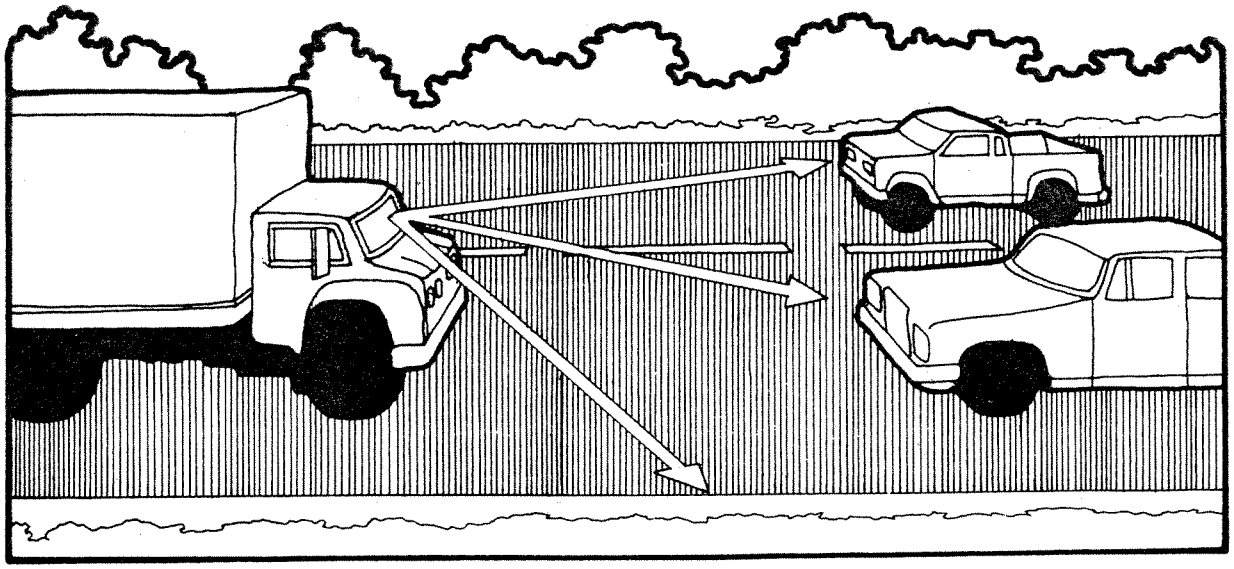
ALWAYS HAVE A PLAN

You should always be looking for driving hazards. Don't forget why you are looking for these hazards; you look for hazards in order to have time to **plan a way out of any emergency.**

An emergency can be a frightening experience. Everything is happening very fast. It is difficult to *think* correctly and to *act quickly.* Yet in a driving emergency, seconds count. Delay, or doing the wrong thing usually results in a serious accident. Thinking correctly and reacting quickly may keep an emergency situation from becoming a serious accident resulting in injury or death. Professional drivers follow proven safety practices to prevent accidents. In an emergency situation, your chances of avoiding an accident will depend on how you react. The following emergency maneuvers may help you prevent a serious accident from happening.

STEERING TO AVOID A COLLISION

Stopping is not always the safest thing to do in an emergency. When you don't have enough room to stop, you may have to steer away from what's ahead. Remember, you can almost always turn to miss an obstacle more quickly than you can stop. However, to do this safely you must already have been alert to the surrounding area in anticipation of the problem.



Keep Both Hands on the Steering Wheel. In order to turn quickly you must have a firm grip on the steering wheel with both hands. The best way to have both hands on the wheel in an emergency is to keep them there all the time.

Where to steer. A quick controlled turn can be made safely if it's done correctly. Here are some points to remember:

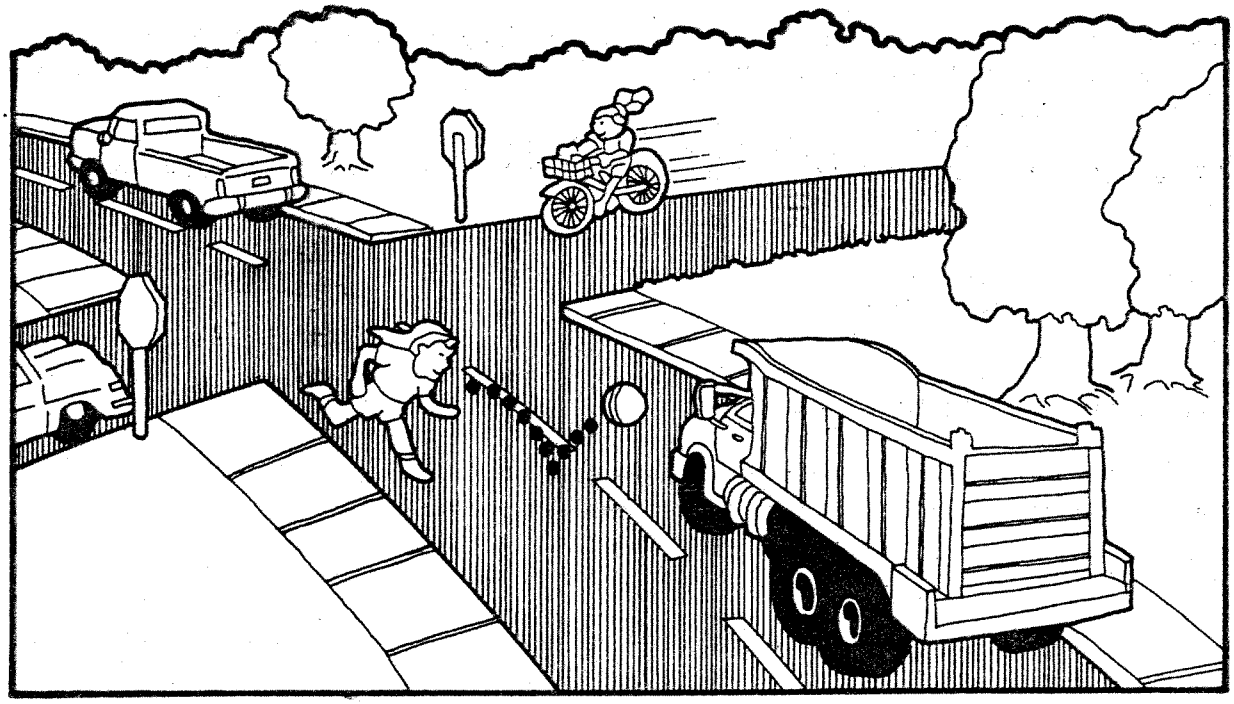
- **Do not** apply the brakes while you are turning. It is very easy to lock your wheels while turning. If that happens, you may skid out of control.
- **Do not** turn any more than needed to clear whatever is in your way. The more sharply you turn, the greater the chances of a skid or rollover.
- If you are blocked on both sides, a move to the right may be best. At least you won't force anyone into an opposing traffic lane and a possible head-on collision.

Leaving the Roadway. In some emergencies, you may have to drive off the roadway. It may be less risky than facing a collision with another vehicle. Most shoulders are strong enough to support the weight of a large vehicle, and therefore offer an available escape route. Here are some guidelines if you leave the roadway:

- **Avoid Braking.** Take your foot off the accelerator. If possible, avoid using the brakes until your speed is reduced and it is safe to do so. Then brake very gently to avoid skidding on a loose surface.
- **Keep one set of wheels on the pavement if possible.** This will help you maintain control.
- **Stay on the Shoulder.** If the shoulder is clear, stay on it until your vehicle has come to a stop. Signal and check your mirrors before pulling back on the road.

Off-road recovery. How to return to the road. If you are off the road and forced to return to the road before you can stop, use the following procedure:

- **Hold the wheel tightly** and turn sharply enough to get back on the road safely. Don't try to edge gradually back on the road. If you do, your tires might grab unexpectedly and you could lose control.
- **When both front tires** are on the paved surface, **counter steer** (turn quickly in the opposite direction) immediately.



EMERGENCY BRAKING

If somebody suddenly pulls out in front of you, your natural response is to step on the brakes. This is a good response if there's enough distance to stop and you use your brakes correctly. Use the following techniques to stop quickly and safely:

Controlled braking. This requires you to apply the brakes as hard as you can **without** locking the wheels. Keep steering wheel movements very small while doing this. If you need to make a larger steering adjustment or if the wheels lock, release the brakes. Then, reapply the brakes as soon as you can.

Stab braking. Apply your brakes all the way. Release brakes when wheels lock up. As soon as the wheels start rolling, apply the brakes fully again.

Do not Jam on the Brakes. Emergency braking does not mean pushing down on the brake pedal as hard as you can. If you do this, the wheels will lock up and cause your vehicle to skid out of control.

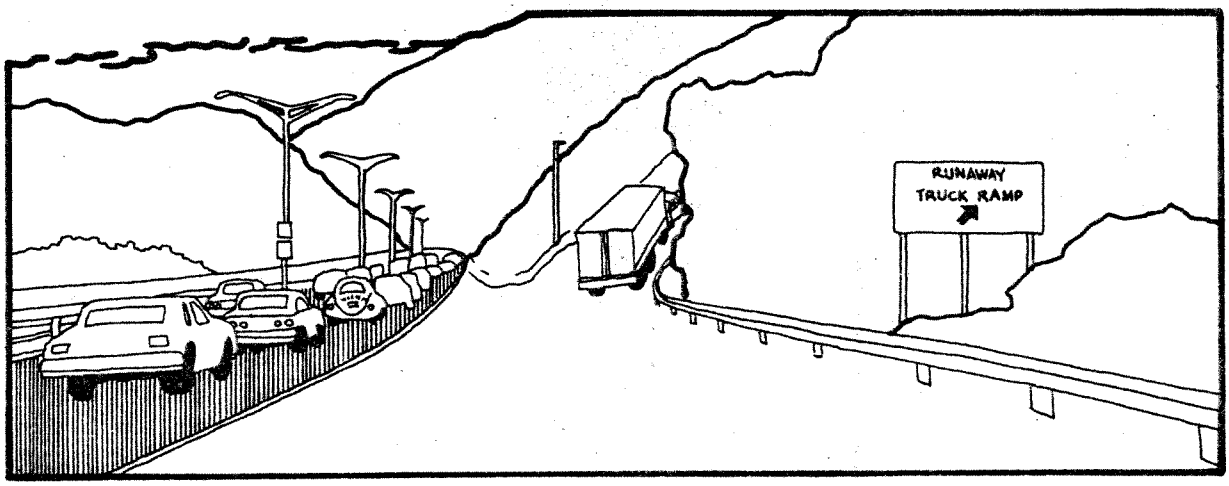
EMERGENCY ACTIONS FOR EQUIPMENT FAILURE

Brake failure. Brakes that are kept in good condition and are checked regularly, rarely fail.

What if I lose may brakes?

Hydraulic Brakes. Most hydraulic brake failures occur for one of two reasons. Loss of hydraulic pressure or brake fade on long hills. When the braking system will not build up pressure, the brake pedal will feel spongy or go to the floor. Here are some things you can do if you lose your hydraulic brakes:

- **Sound your horn.** This will warn others of your situation.
- **Downshift.** Putting the vehicle into a lower gear will help to slow it down.
- **Pump the brakes.** Sometimes pumping the brake pedal will generate enough hydraulic pressure to stop the vehicle.
- **Use the parking/emergency brake.** The parking brake system is separate from the hydraulic brake system. It can be used to slow the vehicle. Be sure to press the release button or pull the release lever at the same time you use the parking brake so you can adjust the brake pressure and keep the wheels from locking up.
- **Find an escape route.** While slowing the vehicle, look for an escape route. Avoid people first, other vehicles second, and look for an escape ramp, side street or open field to drive into. Without a field, look for soft things to hit that will slow you down such as fences, signs, small trees and bushes. Your best hope is an **escape ramp**. *Use it.* Every year, hundreds of drivers avoid injury to themselves and others, and damage to vehicle and property by using **escape ramps**.

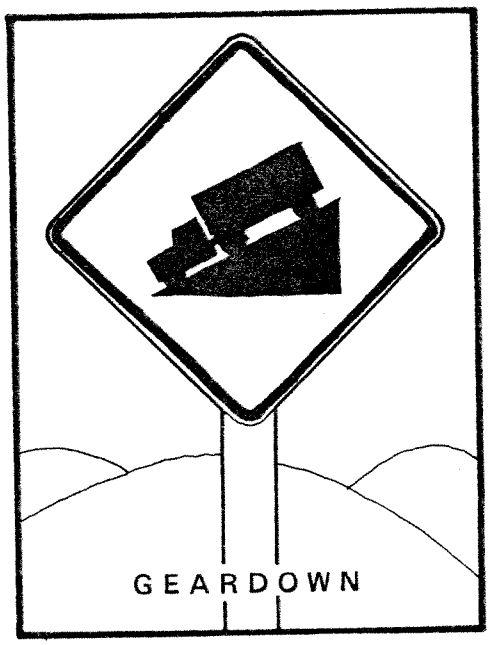


Air Brakes. Most air brake failures occur for two reasons — loss of air pressure or brake fade on long hills. Many of the emergency actions taken when you lose your air brakes are similar to those taken when you lose hydraulic brakes:

- **Sound your horn.**
- **Downshift.**
- **Find an escape route.**
- Use an **escape ramp**, if available.

Other things you can do when you lose your air brakes are:

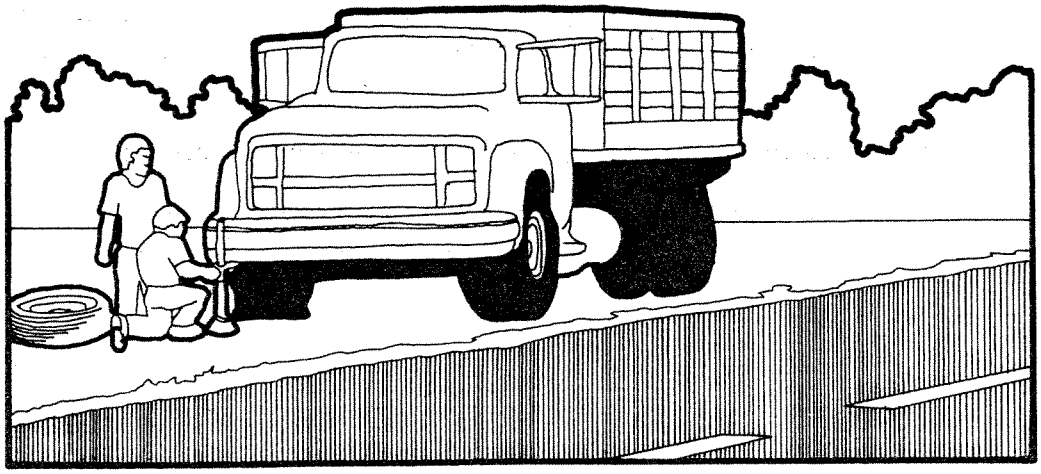
- **Stop and safely park your vehicle as soon as possible.** When the low air pressure warning sounds controlled braking is possible only while enough air remains in the air tanks.
- **Use the parking/emergency brake.** The parking/emergency brake system is a separate brake system. It will activate the spring brake system. It can be used to slow the vehicle. Lightly loaded vehicles or vehicles on slippery roads may skid out of control when the spring brakes come on. It is much safer to stop while there is enough air in the tanks to use the foot brake.
- The spring brakes will come on automatically when the air pressure drops to a range of 20 to 45 psi.



Brake Failure on Downgrades. The correct way to go down long grades is to use a low gear, retarder device and slow down and brake properly. Brakes will stop working when they get too hot. Excessive heat is caused by trying to slow down quickly from a high speed; braking too many times or too quickly. Brakes will fade when they get too hot and will not slow you down. Once your brakes have failed, the only way to stop your vehicle is *downshift* and *look for an escape route* or *escape ramp.*

TIRE FAILURE

Few events in driving can be as startling as a sudden blowout. You may not even hear it happen, especially if your windows are rolled up or the radio is on. All you know is that there is a sharp jerk in the steering wheel and the car seems to "limp". What do you do? There are four things that safe drivers do to handle a tire failure safely. Be aware that a tire has failed. Hold the steering firmly. Take your foot off the accelerator. Stay off the brake. After stopping, check all tires.



Recognizing Tire Failure. Quickly knowing you have a tire failure will let you have more time to react. Having just a few seconds to remember what it is you're supposed to do can help you. The major signs of a tire failure are:

- **Sound.** The loud "bang" of a blowout is an easily recognized sign. Because it takes a few seconds for your vehicle to react, you might think it was another vehicle. Any time you hear a tire blow assume it is yours.

- **Vibration.** If the vehicle thumps or vibrates heavily, it may be a sign that one of the tires has gone flat. With a rear tire, this may be the only sign.

- **Feel.** If the steering feels "heavy", it is probably a sign that one of the front tires has failed. Sometimes, failure of a rear tire will cause the vehicle to slide back and forth or "fishtail". Dual tires on large vehicles usually prevent this.

- **Any of these signs is a warning of possible tire failure. If it happens to you, you should do the following:**

Hold the steering wheel firmly. Keep a firm grip on the steering wheel with both hands at all times. Steer straight as possible staying in your lane. It is *absolutely essential* that you *keep the vehicle under control* and bring it to a gradual stop.

Stay off the brakes. Take your foot off the accelerator but do not brake. Braking when a tire has failed could cause loss of control. Unless you are about to run into something, stay off the brake until the vehicle has slowed down.

Check traffic behind you. If you must change lanes, be sure you do not swerve into the path of another vehicle.

Signal your intention to change lanes.

Look for a safe place to stop.

When speed is reduced and it is safe to do so, begin to apply the brakes slowly and smoothly. Leave the pavement entirely, driving onto the shoulder on the side of the road into a parking space, or onto a driveway.

If you have not already done so, turn on your emergency signal lights and turn off your engine.

Check the Tires. After you have come to a stop, get out and check all the tires. Do this even if the vehicle seems to be handling all right. If one of your dual tires is flat, the only way you may know is by getting out and looking at it.

TEST YOUR KNOWLEDGE

1. Is stopping always the safest thing to do in an emergency? *Explain why.*

2. What are some advantages of going right instead of left around an obstacle?

3. What is an "escape ramp"? When should you use it?

4. If a tire blows out, should you brake hard to stop quickly? *Explain.*

5. Why should you be in the right gear before starting downhill? *Explain.*

6. What is the key to preventing "brake fade"?

IF YOU CAN ANSWER ALL OF THESE QUESTIONS YOU PROBABLY KNOW HOW TO HANDLE THESE EMERGENCIES CORRECTLY AND SAFELY.

IF NOT, YOU SHOULD REVIEW THIS MATERIAL AGAIN.